

WHAT IS CLAIMED IS:

- 1 1. A computer system with a plurality of database management
2 systems comprising:
 - 3 a disk storage system that stores a plurality of databases;
 - 4 a module that combines databases, said module disposed in a server
5 connected to said disk storage system; and
 - 6 a network that interconnects said disk storage system and said server,
7 wherein said module that combines databases, responsive to receiving user-requested
8 specifications, controls data transfer bandwidth for reflecting update data from a database
9 in said disk storage system to another database; and wherein said disk storage system
10 performs resource allocations for said bandwidth responsive to control from said module
11 that combines databases.
- 1 2. A computer system with a plurality of database management
2 systems comprising:
 - 3 a disk storage system that stores a plurality of databases;
 - 4 a module that combines databases, said module disposed in a server
5 connected to said disk storage system; and
 - 6 a network that connects said disk storage system with said server, wherein
7 said module that combines databases, responsive to receiving user-requested
8 specifications relating to a requested refresh rate and a replication data volume,
9 determines a required bandwidth and resources therefor in order to satisfy said user-
10 requested specifications, and wherein said module that combines databases controls
11 resources of said disk storage system; and wherein said disk storage system performs
12 resource allocations for said bandwidth based on control from said module that combines
13 databases.
- 1 3. A computer system with a plurality of database management
2 systems comprising:
 - 3 a module that controls refreshes responsive to a requested refresh rate;
 - 4 a module that controls replica creation; wherein said module that controls
5 refreshes further comprises a module that combines databases, which instructs, at
6 intervals based on said requested refresh rate, said module that controls replica creation to
7 replicate at least one database; and

8 a disk storage system that stores a plurality of databases, wherein said disk
9 storage subsystem reflects update data from a first database to a second database under
10 control of said module that controls replica creation.

1 4. A computer system with a plurality of database management
2 systems for performing database replication, said computer system comprising:
3 a disk storage system that stores a database;
4 a module that combines databases which, when data from a data
5 warehouse database is to be reflected in a plurality of data marts, measures replication
6 processing time and, if said processing time is at or exceeds requested specifications,
7 creates a replica of a data warehouse database in said disk storage system.

1 5. In a computer system comprising a first server and a second server,
2 interconnected by a network to a disk storage subsystem, a method for replicating content
3 of a first database associated with said first server to a second database associated with
4 said second server, said first database and said second database disposed in said disk
5 storage subsystem, said method comprising:

6 allocating resources to perform a copy within said disk storage subsystem;
7 and

8 replicating content from said first database to said second database;
9 wherein said replicating is performed using said resources in said disk subsystem
10 substantially independently of sending said content over said network.

1 6. The method of claim 5 wherein said first database is of a first
2 format and said second database is of a second format, said replicating content from said
3 first database to said second database in said disk subsystem further comprising:

4 replicating said content from said first database to an intermediate
5 database, said intermediate database disposed on a shared volume of both said first format
6 and said second format; and

7 replicating said content from said intermediate database to said second
8 database.

1 7. The method of claim 5 wherein said computer system further
2 comprises a third server, said method further comprising:
3 receiving at said third server at least one of a plurality of requested
4 specifications relating to replication;
5 determining a data transfer capacity according to said specifications;
6 determining at least one of a plurality of data transfer capacity settings
7 according to said data transfer capacity;
8 notifying said disk subsystem of said data transfer capacity settings; and
9 allocating resources in said disk subsystem for data transfer based on said
10 data transfer capacity settings.

1 8. In a computer system comprising a first server and a second server,
2 interconnected by a network to a disk storage subsystem, a computer program product for
3 replicating content of a first database associated with said first server to a second database
4 associated with said second server, said first database and said second database disposed
5 in said disk storage subsystem, said computer program product comprising:
6 code for allocating resources to perform a copy within said disk storage
7 subsystem;
8 code for replicating content from said first database to said second
9 database; wherein said replicating is performed using said resources in said disk
10 subsystem substantially independently of sending said content over said network; and
11 a computer readable storage medium for holding the code.

1 9. A disk storage subsystem, said disk storage subsystem operable in
2 a computer system comprising a plurality of computers, said plurality of computers
3 interconnected to said disk storage subsystem by at least one of a plurality of information
4 channels, wherein said disk storage subsystem copies content from a first database to a
5 second database using resources in said disk subsystem substantially independently of
6 sending said content over said information channels; and wherein said disk storage
7 subsystem performs copies said content in accordance with a resource allocation received
8 from one of said plurality of computers, said resource allocation based upon at least one
9 of a plurality of data transfer capacity settings determined by said one of said plurality of
10 computers in accordance with a data transfer capacity and at least one of a plurality of
11 received specifications.

1 10. A disk storage subsystem operable in a computer system
2 comprising a first server and a second server, interconnected by a network to said disk
3 storage subsystem, wherein said disk storage subsystem replicates content of a first
4 database associated with said first server to a second database associated with said second
5 server, said first database and said second database disposed in said disk storage
6 subsystem, wherein said disk storage subsystem allocates resources to perform content
7 replication within said disk storage subsystem; and said disk storage subsystem replicates
8 content from said first database to said second database; wherein said replicating is
9 performed substantially independently of sending said content over said network.

1 11. A computer system with a plurality of database management
2 systems comprising: a disk storage system storing a plurality of databases; means for
3 combining databases disposed in a server connected to said disk storage system and a
4 network, receiving user-requested specifications, and controlling data transfer bandwidth
5 involved in reflecting update data from a database in said disk storage system to another
6 database; and said disk storage system performing resource allocations for said bandwidth
7 based on control from said database combining means.

1 12. A computer system with a plurality of database management
2 systems comprising: a disk storage system storing a plurality of databases; means for
3 combining databases disposed in a server connected to said disk storage system and a
4 network, receiving user-requested specifications relating to requested refresh rate and
5 replication data volume, determining required bandwidth and resources therefor in order
6 to satisfy said user-requested specifications, and controlling resources of said disk storage
7 system; and said disk storage system performing resource allocations for said bandwidth
8 based on control from said database combining means.

1 13. In a computer system performing database replication, a computer
2 system with a plurality of database management systems comprising: a disk storage
3 system storing a plurality of databases, connected to a network, and including an interface
4 relating to a plurality of heterogeneous database management systems, a shared volume
5 acting as an intermediate file in replication operations, a plurality of host paths sending
6 and receiving data to and from a server; and means for creating replicas creating
7 snapshots of a database serving as a transfer source of data in replication operations;

8 means for combining databases disposed in a server connected to said network, receiving
9 user-requested specifications relating to requested data refresh rates and replication data
10 volume, and specifying a number of said host paths, a number of said shared volumes,
11 and a number of replicas based on snapshots in order to satisfy said requested
12 specifications; and wherein said disk storage system allocates said host paths and said
13 shared volumes as specified, executes snapshots, reports results to said server, and
14 allocates resources relating to said bandwidth.

1 14. A computer system with a plurality of database management
2 systems comprising: means for controlling refreshes receiving a requested refresh rate;
3 means for creating replicas controlling replica creation; and said refresh controlling
4 means including means for combining database instructing, at intervals based on said
5 requested refresh rate, said replica creating means to execute replication, and a disk
6 storage system storing a plurality of databases, and reflecting update data from a database
7 to another database based on control from said replica creating means.